

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3545

CHICAGO, ROCK ISLAND AND PACIFIC
RAILROAD COMPANY

IN RE ACCIDENT

AT NORTH FORT WORTH, TEX., ON

NOVEMBER 22, 1953

SUMMARY

Date: November 22, 1953

Railroad: Chicago, Rock Island and Pacific

Location: North Fort Worth, Tex.

Kind of accident: Head-end collision

Trains involved: Freight : Freight

Train numbers: Extra 5227 North : Extra 75 South

Engine numbers: Diesel-electric units 5227, 5314, and 5226 : Diesel-electric units 75, 70B, and 70

Consists: 53 cars, caboose : 84 cars, caboose

Estimated speeds: Standing : 6 m. p. h.

Operation: Timetable, train orders, and automatic block-signal system; yard limits

Track: Single; tangent; 1.0 percent descending grade southward

Weather: Clear

Time: 12:30 p. m.

Casualties: 4 injured

Cause: Failure properly to control speed of train moving within yard limits

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3545

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY

January 5, 1954.

Accident at North Fort Worth, Tex., on November 22, 1953,
caused by failure properly to control the speed of
a train moving within yard limits.

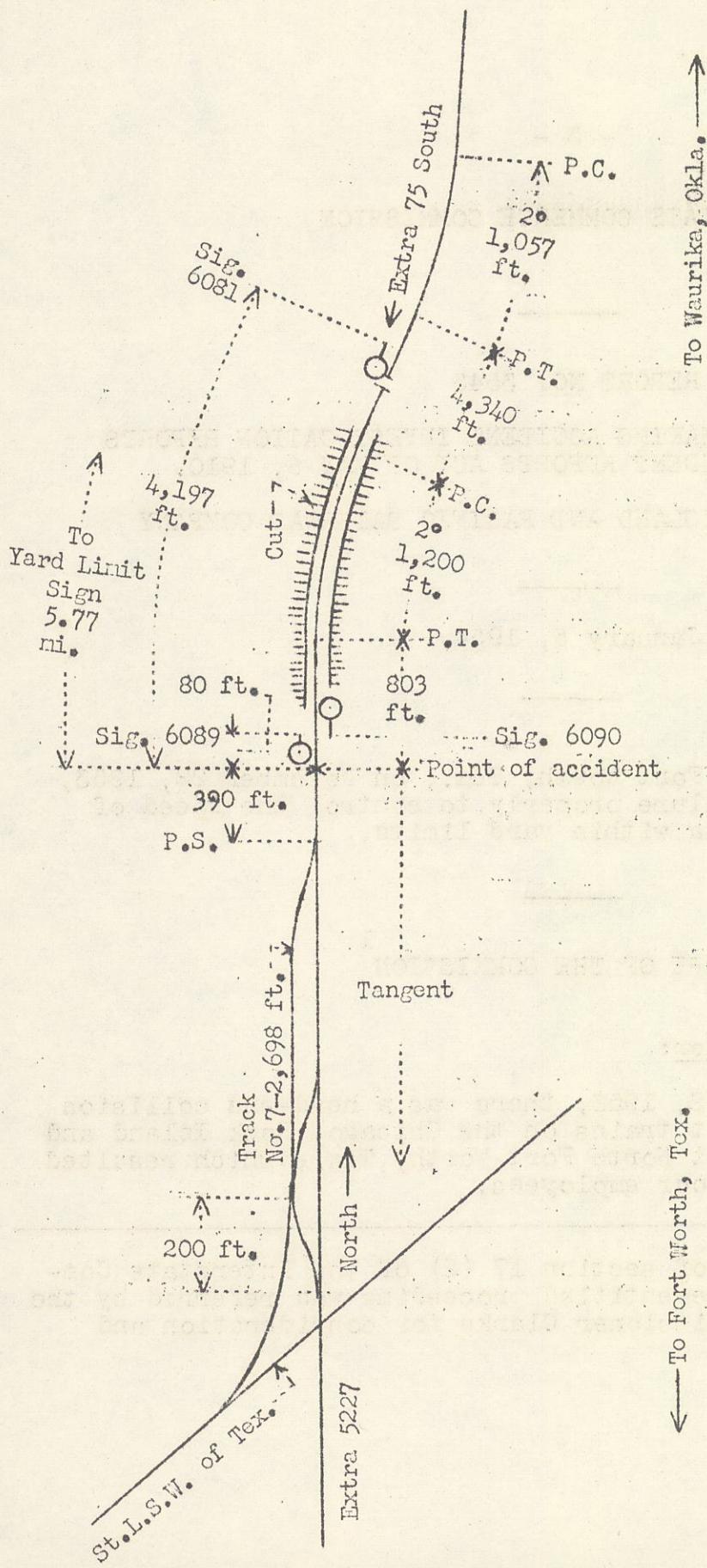
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REPORT OF THE COMMISSION

CLARKE, Commissioner:

On November 22, 1953, there was a head-end collision
between two freight trains on the Chicago, Rock Island and
Pacific Railroad at North Fort Worth, Tex., which resulted
in the injury of four employees.

¹

Under authority of section 17 (2) of the Interstate Com-
merce Act the above-entitled proceeding was referred by the
Commission to Commissioner Clarke for consideration and
disposition.



Report No. 3545
Chicago, Rock Island and Pacific Railroad
North Fort Worth, Tex.
November 22, 1953

Location of Accident and Method of Operation

This accident occurred on that part of the Southern Division extending between Fort Worth, Tex., and Waurika, Okla., 113.1 miles. Trains of the St. Louis, San Francisco and Texas Railway Company, hereinafter referred to as the Frisco, regularly are operated over that portion of this line extending between Fort Worth and North Fort Worth, 3.4 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders, and an automatic block-signal system. At North Fort Worth an auxiliary track 2,698 feet in length, designated as track No. 7, parallels the main track on the west. At a point 200 feet north of the south switch of track No. 7 an interchange track diverges from track No. 7 and connects with an adjacent track of the St. Louis Southwestern Railway Company of Texas. The switch is trailing-point for north-bound movements. Immediately north of this switch a crossover connects track No. 7 with the main track. The north crossover-switch is trailing-point for north-bound movements. Yard limits extend between Fort Worth and a point 5.77 miles north of the north switch of track No. 7. The accident occurred on the main track within yard limits and at a point 390 feet north of the north switch of track No. 7. The main track is tangent throughout a considerable distance immediately south of the point of accident and 803 feet northward. From the north there are, in succession, a 2° curve to the right 1,057 feet, a tangent 4,340 feet, a 2° curve to the left 1,200 feet, and the tangent on which the accident occurred. The grade for south-bound trains is, successively, 1.0 percent descending a distance of 4,800 feet, 0.91 percent descending 1,000 feet, 1.0 percent descending 2,900 feet, 0.60 percent descending 1,400 feet, 0.92 percent descending 1,400 feet, and 1.0 percent descending 733 feet to the point of accident and 3,100 feet southward. Immediately north of the point of accident the track is laid in a cut approximately 2,075 feet in length. The south end of the cut is 256 feet north of the point of accident. The east wall of the cut reaches a maximum height of 26 feet above the level of the tops of the rails at a point approximately 600 feet north of the point of accident.

Automatic signals 6081 and 6089, governing south-bound movements, are located, respectively, 4,197 feet and 80 feet north of the point of accident. Automatic signal 6090, governing north-bound movements, is opposite signal 6089.

Signals 6081 and 6089 are of the searchlight type and are continuously lighted, each displaying two aspects. The aspects applicable to this investigation and the corresponding indications and names are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
6081	Yellow	Proceed, immediately reducing to 30 MPH, or slower if necessary, prepared to stop before the leading wheels pass the next signal.	APPROACH
6089	Red over number plate	Stop, then proceed at Low Speed through the entire block.	STOP AND PROCEED

The controlling circuits are so arranged that when the block of signal 6081 is unoccupied and the block of signal 6089 is occupied, signal 6081 indicates Approach and signal 6089 indicates Stop and Proceed.

This carrier's operating rules read in part as follows:

DEFINITIONS.

Medium Speed.--A speed not exceeding 30 miles per hour.

Restricted Speed.--Proceed prepared to stop short of train, engine, obstruction or switch not properly lined.

Low Speed.--A speed that will permit stopping short of train, engine, obstruction or switch not properly lined and looking out for broken rail, but not exceeding 15 miles per hour.

34. Calling of Signals.--All members of engine and train crews must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine.

Signal indications * * * must be seen before being communicated to each other.

93. * * *

Within yard limits, the main track may be used without protecting against second and inferior class trains, extra trains and engines.

Within yard limits, second and inferior class trains, extra trains and engines must move at restricted speed.

93 (a). Block Signals in Yard Limits.--Block signal indications within yard limits do not relieve trains and engines from moving at restricted speed * * *

The maximum authorized speed for freight trains is 50 miles per hour.

Description of Accident

Extra 5227 North, a north-bound Frisco freight train, consisted of Diesel-electric units 5227, 5314, and 5226, coupled in multiple-unit control, 53 cars, and a caboose. This train entered the line of the Chicago, Rock Island and Pacific Railroad at Irving, Tex., 24.1 miles south of Fort Worth, and was en route to the line of the St. Louis Southwestern Railway of Texas at North Fort Worth. It departed from Irving at 11:07 a. m. and arrived at North Fort Worth about 12:20 p. m. It was stopped on the main track at North Fort Worth with the front of the locomotive about 380 feet north of the north switch of track No. 7. The locomotive was then detached and moved northward a distance of approximately 10 feet. About 10 minutes later the front end of the locomotive was struck by Extra 75 South.

Extra 75 South, a south-bound Chicago, Rock Island and Pacific freight train, consisted of Diesel-electric units 75, 70B, and 70, coupled in multiple-unit control, 84 cars, and a caboose. This train departed from Waurika at 9:25 a. m., passed the yard limit sign north of North Fort Worth, departed from Saginaw, 4.3 miles north of the point of accident and the last open office, at 12:20 p. m., passed signal 6081, which indicated Approach, passed signal 6089, which indicated Stop and Proceed, and while moving at an estimated speed of 6 miles per hour it struck the locomotive of Extra 5227 North.

The locomotive of Extra 5227 North was moved southward and it struck the first car of the train. The train was moved southward a distance of about 30 feet by the force of the impact. No equipment of either train was derailed. The front ends of the locomotives of both trains were slightly damaged.

The engineer, the fireman, and the front brakeman of Extra 5227 North and the fireman of Extra 75 South were injured.

The weather was clear at the time of the accident, which occurred about 12:30 p. m.

The Diesel-electric units of Extra 75 South were equipped with 8-EL brake equipment.

Discussion

As Extra 5227 North was approaching the point where the accident occurred the engineer, the fireman, the front brakeman, and a road foreman of equipment were on the locomotive. The conductor and the flagman were in the caboose. Train order authority was not required for the movement within yard limits at North Fort Worth. Because the number of cars in the train exceeded the capacity of track No. 7, the train was routed via the main track at North Fort Worth and it stopped with the front end about 380 feet north of the north switch of track No. 7. The rear end was north of the crossover between track No. 7 and the main track. Members of the crew on the locomotive observed that the aspect of signal 6090 changed from green to yellow and then to red while the stop was being made. Immediately after the train stopped, the locomotive was detached and moved northward a distance of about 10 feet. A yard locomotive was coupled to the rear end of the train for a reverse movement through the crossover and the interchange track to the line of the St. Louis Southwestern Railway of Texas. The members of the crew of the locomotive proceeded to change the controls for operation from the control compartment at the south end of the locomotive. The engineer said that when he proceeded to the south end of the locomotive he found that the fireman had completed preparations for operation from that end, and that the independent brake of the locomotive was applied. The enginemen and the front brakeman remained in the control compartment at the south end of the locomotive for several minutes. The engineer said that he then glanced northward and observed the south-bound train closely approaching. The collision occurred a few seconds later. The road foreman of equipment remained in the control compartment at the north end of the locomotive. He said that when he first observed the south-bound train approaching it was about 250 feet distant. He estimated that it was moving at a speed of 8 to 12 miles per hour. The

conductor and the flagman said that brake-pipe pressure had been restored by the yard locomotive and that the brakes of the train had been released when the accident occurred.

As Extra 75 South was approaching the point where the accident occurred the engineer, the fireman, and the front brakeman were maintaining a lookout ahead from the control compartment at the front of the locomotive. The conductor and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The train was stopped in compliance with the Stop indication of an interlocking signal at Saginaw. Soon afterward it proceeded southward and passed two signals, each of which indicated Proceed. Signal 6081, the third signal south of Saginaw, indicated Approach, and the indication was called by all members of the crew on the locomotive. The engineer estimated that the speed was about 14 miles per hour when the locomotive passed the signal. He made a brake-pipe reduction of about 10 pounds when the locomotive was approximately 450 feet south of the signal. Because of track curvature and the walls of the cut, the view of signal 6089 from the locomotive of a south-bound train is restricted to a distance of 1,144 feet. The engineer said that when this signal became visible from his locomotive it was displaying a red aspect and the indication was called immediately by all members of the crew on the locomotive. He said that he then increased the brake-pipe reduction and made a full-service application of the brakes. Soon afterward he became concerned that the train would not be stopped short of the signal, and he moved the brake valve to emergency position and opened the sander valve. When it became apparent that the train would strike the locomotive standing south of the signal he called a warning. The fireman and the front brakeman said that they had observed the engineer apply the brakes several times after the train passed the yard limit sign. Until the engineer called a warning, they thought the speed of the train was being controlled properly. The enginemen and the front brakeman alighted from the locomotive before the collision occurred. The engineer estimated that the speed was reduced to about 4 miles per hour at the point of collision.

The brakes of this train were used to stop the train at two points between Waurika and the point of accident. The speed of the train was reduced by a brake application at six other points en route. In each instance the brakes functioned as intended and the speed of the train was properly controlled. The train was stopped at Saginaw by the use of the brakes and departed from that point about 10 minutes before the accident occurred.

The rules of this carrier require that within yard limits extra trains and engines must move at restricted speed. Block-signal indications within yard limits do not relieve the crews of trains and engines from the requirement that movements must be made at restricted speed. Under the rules, Extra 75 South was required to be operated in such manner that it could be stopped short of a train or obstruction, and, in addition, the indication of signal 6081 required that the train be operated in such manner that it could be stopped short of signal 6089.

Cause

This accident was caused by failure properly to control the speed of a train moving within yard limits.

Dated at Washington, D. C., this fifth day of January, 1954.

By the Commission, Commissioner Clarke.

(SEAL)

GEORGE W. LAIRD,

Secretary.